The Indian Poultry Gazette.

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CONTENTS.

	Page.
From the Editor's Chair	... 129
Empire Marketing Board Report ...	... 131
Problems of Artificial Incubation ...	... 131
Practical hints on Poultry housing and equipment in India	... 134
Show Report of the South Indian Poultry Association	... 136
Minerals—their use and abuse ...	... 140
Letters to the Editor	... 142
The influence of diet upon the course of Coccidiosis infection in Chickens	... 144
Producing and handling quality Eggs ...	... 147
? ? ? ? ...	... 148

FROM THE EDITOR'S CHAIR.

Our Editorial Notes in the July issue must have caused a little misunderstanding amongst some of our readers specially the Hobbyist—about the new Indian Poultry Club and Gazette under us. They must have thought, by going through the Gazette, that the Club was going to be a purely Utility Affair, and the interests of the Hobbyist, or more precisely, the one who keeps a few fowls for his own use, were going to be neglected.

Let us state here clearly that we consider the owner of a small flock or the fancier is as much important as Commercial Farmer or the Utilitarian. I must frankly admit here that the number of the latter class of owners of poultry is yet very small in India and the Club cannot be any use to the industry without doing justice to the former class. We shall, therefore, do all it is possible for us to do, to look after the interests of this class.

We hope to hear soon from the Delhi Government about the All India and shall be glad to announce their decision in respect of a grant for it. We wrote to them and they have asked us for a copy of the report for the last All India Poultry Exhibition, which we have sent already. It is, however, hoped that Mr. E. W. Grindal, Deputy Accountant-General, Central Revenues, will take up the duties of the Honorary Secretary.

We are very grateful to Captain S. G. M. Hickey, Director, Civil Veterinary Department, United Provinces, Lucknow and President, United Provinces Poultry Association, for his useful suggestions regarding the improvement of the Gazette, the loan of journals and reports, and for his kind offer of help in regard to fowl diseases. We hope members in Lucknow would take advantage of this and let us know exactly what they want, if there is sickness, and we shall approach Captain Hickey for his assistance if this would be necessary.

We are also grateful to Mr. Pandey, Secretary, United Provinces Poultry Association for allowing us the use of some of the Associations, journals, which we have sent for from the places concerned.

We are extremely sorry to have to announce the sad death of one of our chief Life Members and a great lover of poultry—the Rajah Bahadur of Mursan. All the beautiful fowls, he had, have been sold.

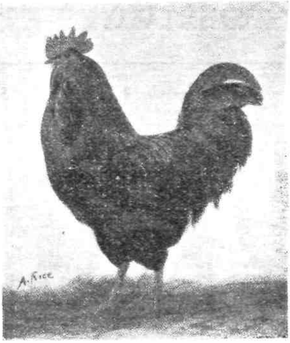
We wish his son could take the same interest as his father and offer our sincere condolence to those connected with him and hope all readers associate themselves with us in doing so. The Poultry Industry, or, more correctly the Fancy, has lost a great friend.

We regret we again received reports of that dreadful foe of poultry, the "Ranikhet" disease, from some provinces.

We are glad to be in a position to say that we applied to the Imperial Institute of Veterinary Research, Muktesar for their assistance in regard to fowl diseases and the Director not only very kindly agreed to give us all possible help but has also become a subscriber to the Gazette. So we would request members to let us know in times of difficulty, without any hesitation, and we shall be glad to do the rest.

We are framing a standard for judging Asils as this, we think, is likely to cause difficulty. We should like to have suggestions as to who should take up this task in the next All India as we think, now, having taken over the Indian Poultry Club, we may not be able to do full justice to it at the Exhibition on account of various other engagements.

While inviting these suggestions we should like to point out that judging the—Asil—a bird meant for fighting is a very difficult task because of fighting being forbidden by law, and this may be kept in view when making them.



AUSTRALORPS.

Mrs. Grain has imported a further pen of this wonderful dual purpose fowl SEE THEM AT THE SHOW and judge for yourselves.

EGGS FOR HATCHING.

No. 1 pen per setting Rs. 25.—Headed by imported cockerel of magnificent type bred from 267 egg dams, mated to 2 imported pullets of 251 egg dams, and 6 of my last year hens specially selected for heavy egg production.

No. 2 pen per setting Rs. 15.—Headed by imported cock, 1st Lucknow 1930, fully acclimatised, proved sire of winners, his son was placed 1st in class Calcutta 1931, mated to 8 selected pullets sired by cockerel placed 2 in class at Calcutta January 1931.

No. 3 pen per setting Rs. 15.—Headed by cock placed 2 in class at Calcutta January 1931, mated to 8 specially selected pullets sired by imported cock now heading No. 2 pen.

WHITE LEGHORNS.

No. 1 pen per setting Rs. 15.—Headed by imported cock of 280 egg strain mated to 10 hens of good utility type and layers of large eggs.

No. 2 pen per setting Rs. 15.—Headed by cockerel whose dam laid 525 eggs in 24 months mated to 8 hens of good utility type and heavy layers of large eggs.

15 eggs sent with each setting in full satisfaction.

MRS. R. GRAIN.

12 **107, BUNGALOW, - - - KANCHRAPARA E. B. Ry.**

GET IT FROM BLACK LAKE

WHITE LEGHORN AND WHITE WYANDOTTE PULLETS AND COCKERELS.

Quantity in Eggs is governed by quality of stock. However good your equipment or care in the management of your Flocks, you cannot get the profitable quantity and size of eggs unless the quality of stock is there. I, therefore, commend the BLACK LAKE strain as real dividend earners.

Every BLACK LAKE bird is a pedigree bird of known parentage. All Pullets are trapnested daily. NO PULLET BREEDING. NO FLOCK MATING. NO BATTERY BROODERS.

All Breeding Stock is Blood-Tested.

Every Egg, Chick, and Bird sold is an exclusive product of BLACK LAKE FARM, bred and reared under my own personal supervision. I NEVER BUY IN to supply customers.

PRICES.

According to Pedigree—Single Birds from **£4** to **£7.**
Specially selected for Utility Show Purposes from **£5** to **£9.**
Trios from **£7, £8, £10** to **£15.**
Two trios from **£12, £15, £18** to **£28.**

Prices are inclusive of all charges paid to Indian Port—Live delivery at Port guaranteed.

THE HON. GERALD S. MONTAGU.

BLACK LAKE POULTRY FARM, - - - EGHAM, SURREY, ENGLAND.

9 **Cables:—"EGGS, EGHAM".**

We have received some Curall Pills from Mr. Mushtaque for trial and shall be glad to give our experience in a later issue.

An item of news that will be received with great satisfaction is that many travelling boxes, containing live day old pedigree chicks consigned from England, by air, to poultry farms in Russia have been among the shipments of livestock dealt with, recently, by Imperial Airways.

We hope this, in future, may quicken the transport of chicks to different countries and make it possible for India too, to get them which she needs so badly for the improvement of her stock.

It may interest readers to note that the third Jammu and Kashmir State Exhibition will open in Srinagar in the first week of September. The Exhibition will be confined to the produce and manufactures of the State and will include horse, cattle, Poultry, flower, fruit and vegetable Shows.

We would invite readers special attention to Mr. Hearsey's letter, printed elsewhere in this issue, which requires careful examination. While we frankly admit marketing has been sadly neglected in this country, we are afraid we cannot accept the argument that careful modern scientific poultry farming cannot compete with the khatick, as very sound. We have written a letter to the different daily newspapers in India in this connection and we shall be glad to reprint the same in the Gazette next month as space does not permit this in this issue. Matters can be improved by devising means to overcome difficulties and not by giving up making efforts in despair. In our opinion a suggestion, like the following, may be of same use. That a stall or a number of them, in hill stations and important commercial and military towns, of large sized, clean, fresh, graded, and nicely arranged eggs be established. This would attract the purchaser and may facilitate getting better prices for improved eggs and there is bound to be some business. The Khatick might also be tempted to procure the same quality of eggs in order to get better prices than what he gets for his commodity at present. Producers must then, on no account, sell their eggs at low rates, and then, after expansion of business, a time may come when the Khatick too may be obliged to sell at these very rates. Another thing is that it is up to the consumer to differentiate between good and bad quality and a serious attempt must be made by the organisers of the Poultry Industry in, India to devise means for this purpose.

We would invite attention to Messrs. Dowden & Son's advertisement in this issue, which we understand, is a reputed farm in Sussex, England, of pedigree stock, and is worth a trial.

While saying so we must state that readers must not forget Mr. Howard too who has satisfied so many in India.

EMPIRE MARKETING BOARD REPORT.

Twenty-five New Empire Records.

The change which has taken place in the buying habits of the British public and the growth of the demand for Empire goods are clearly brought out in the annual report of tha Empire Marketing Board, which is published to-day (H. M. Stationery Office, 1s net.) For twenty-five Empire products new records in quantities of imports have been established, and for more than half of these a record now surpassed was made in the previous year. There is an upward tendency at work in spite of the diminished buying power of the public.

As in previous years, the Empire Marketing Board has made a large grant for Home agriculture, and gave £42.500 to the Ministry of Agriculture and Fisheries for their standardisation of Home products. As before a further special grant of £55,000 for publicity on behalf of National Mark products was passed through the Empire Marketing Fund.. The growth of the demand for these products goes steadily forward, and 312,000,000 eggs were sold last year as against 222,000,000 the year before.

A DISAPPOINTED POULTRYMAN.

He brought a flock of chickens,
"I'll have fresh eggs," he said;
Oh, Gosh, but he was ignorant—
The chickens crowed, instead.

* * * *

"Hellow, old man! How did the banquet go over last night?"

"Great! It was sure a wow? Two of the speakers swallowed chicken bones and couldn't say a word."

Smith asked Brown if he sent his shirts to the Dhobie? Brown said, "No" I wear them once and tear them up myself."

PROBLEMS OF ARTIFICIAL INCUBATION.

(Continued from last month.)

The incubation environment of eggs is most important to the development of the embryo and to the health and vigour of hatched chicks. As far as our present knowledge goes there are several factors which determine the success of hatching. The most important ones are :—

(1) Heat. (2) Air. (3) Moisture.

The role of heat in plants and animals is generally to promote growth. But there are definite limits of temperature outside of which the seed of a plant or the egg of an animal will not develop. The chick embryo does not begin to develop until the egg is heated to about 68°F., or physiological zero. The normal incubation temperature corresponds somewhat to the temperature of a sitting hen, that is, about 102°F. However, the temperature of the upper part of the egg, which is in immediate contact with the body of hen, is higher than that of the lower part.

IT'S SMART TO SAVE

GET IT FROM

THE GREAT EASTERN STORES

CALCUTTA.

FINEST COLD STORAGE IN THE EAST
SERVICE FOR MUFOSSIL CUSTOMERS
STOCKS OF RELIABLE VARIETIES
VALUE FOR MONEY.

Latest Price List on Application.

THE G. E. STORES, LTD.,

30, CHOWRINGHEE,

CALCUTTA.

8

MISSION POULTRY FARM, ETAH, U. P.

SPECIALIZES IN :—

DUAL PURPOSE EXHIBITION AND UTILITY R. I. REDS.
EXHIBITION AND UTILITY MINORCAS.
EXHIBITION AND UTILITY WHITE LEGHORNS.

EGGS FOR HATCHING.

R. I. REDS, EX-UTILITY ... **Rs. 30/-** per Dozen.	UTILITY MINORCAS ... **Rs. 18/-** per Dozen.
R. I. REDS UTILITY ... **Rs. 18/-** per Dozen	EXHIBITION LEGHORNS (Dewar's) ... **Rs. 24/-** per Dozen.
EXHIBITION MINORCAS (Imported Pen) ... **Rs. 30/-** per Dozen.	UTILITY LEGHORNS ... **Rs. 18/-** per Dozen.

Packing and despatch free. 15 eggs sent to the Dozen.

UNTIL FURTHER NOTICE ALL EGGS FOR HATCHING HALF PRICE.

BREEDING STOCK FOR SALE.

Cocks, Cockerels, Hens, Pullets, Exhibition White Leghorns Rs. **15/-, 20/-** and **25/-** each.
Utility White Leghorns Rs. **10/-, 15/-** and **20/-** each.

Crate and Freight extra at cost.

SATISFACTION GUARANTEED.

1. **A. E. SLATER,** ***Manager.***

This difference may be from 10° to 20°F., depending upon the weather, location of the nest, and nesting material. We may assume from our general knowledge of biology that the difference in temperature of various parts of an egg gives stimulus to the vital functions of the embryo.

It is interesting to note that observations of the temperature under sitting hens do not reveal a considerable change of temperature throughout the incubation period. Yet our experiments show that lowering of the temperature during the last week of incubation, under proper humidity and ventilation conditions, decidedly improves the hatching. This indicates that scientific methods can modify and possibly change the nature of incubation. It could be exemplified by already used scientific methods in selection and breeding of hens for unseasonable and high egg production.

Air is an important factor for its supply of oxygen. Oxygen is used by the developing embryo for respiration and burning of food materials which results in production of heat and energy for development. As a by-product of energy exerted by the embryo there is a continuous exertion of carbon dioxide. A chick embryo, for example, during its development uses about 1·5 cubic feet oxygen and produces about 1 cubic foot of carbon dioxide. The consumption of oxygen and output of carbon dioxide are relatively small at the beginning of incubation; they gradually increase with the growth of the embryo, and finally they reach the highest point at hatching time. Outdoor air usually contains only about 0·02 per cent. of carbon dioxide. Under the sitting hen with the advancement of incubation the content of carbon dioxide increases to 0·6 per cent., that is, thirty times the above value. The amount is small as compared with that occasionally found in the mammoth incubators. Therefore the problem of purification of air in our practice of incubation is important and particularly so at the time of hatching. From the moment of peeping the embryo begins to use its lungs for breathing, and it becomes very sensitive to carbon dioxide gas. We have found that the embryo before peeping can withstand for several days over 20 per cent. of carbon dioxide, while after peeping, with less than 10 per cent. it dies immediately from so called "Suffocation".

The proper amount of moisture is necessary for the preservation of the embryo by: (1) the regulation of evaporation in an egg during incubation, and (2) the conditioning of air. Under natural incubation eggs are covered with a film of oil which is excreted from the body of a hen. The film of oil presumably prevents the eggs from excessive evaporation, yet permits the exchange of respiratory gases, that is, consumption of oxygen and excretion of carbon dioxide. At the time of hatching the problem of humidity of air is important in connection with the incubation temperature. High temperature requires correspondingly high humidity in order to prevent the chilling of the chick by rapid evaporation or drying. On the other hand, relatively high humidity at high temperature obstructs the hatching by lowering the vitality of the chick. Therefore humidity is important in connection with the carbon dioxide content in the incubator. High humidity in the presence of carbon dioxide facilitates the assimilation of calcium from the egg shell for the formation of bones in the chick.

There are several other factors of minor importance to the developing embryo. They are: turning, cooling and position of eggs, atmospheric pressure, light, etc. The turning of the eggs is presumably essential for stimulation of normal growth and development of the eggs. Also, turning of eggs, particularly at early stages of incubation, prevents the adhesion of the yolk to the shell membranes, or the rupture of the sack in which the embryo is enclosed. The moderate cooling of eggs undoubtedly stimulates the vital functions of the embryo. The position of eggs in the incubator perhaps has no appreciable effect on hatching. Increase in atmospheric pressure in general has a tendency to hasten the development. Whether the application of pressure artificially is helpful to the developing embryo and would be practical is not yet known. Light, particularly the ultra-voilet rays, perhaps, has value as a disinfecting agent for the eggs.

All these environmental factors of incubation, heat, air, humidity and many others about which our knowledge is still insufficient, determine the success of embryonic development, and the health of hatched chicks.

Conclusion.—In conclusion we may say that the process of incubation of eggs is based on three fundamental principles, or requirements of nature.

These requirements are: (1) an active reproductive cell, (2) adequate nourishment and (3) suitable environment.

The reproductive cell must be living and active in order to carry on the growth and vital functions of the developing chick. The nourishment must be proper, balanced, and adequate in order to build up the complex body of the chick. The environment must be suitable in order to maintain normal growth and development of the chick. Each of these natural factors in the growth of the embryo has its own place and importance in our practice of artificial incubation.

(To be continued in subsequent issues).

ADVERTISE

IN THE

I. P. GAZETTE.

THE ONLY POULTRY JOURNAL OF INDIA.

PRACTICAL HINTS ON POULTRY HOUSING AND EQUIPMENT IN INDIA.

Parts 2 and 3.

By

CAPT. W. SHERRARD-SMITH, M.C.

(Continued from last month)

Trap Nests.—I feel that the purport of this little work will have materially failed if I omitted to emphasise *the importance of Trap Nests. Without* trap-nests you will never know your birds. It is only by means of trap-nests that you will determine the individual laying performance of each bird. Successful pedigree breeding can be conducted only by means of trap-nests, and it is the only sure means whereby the unprofitable producers in a laying flock are revealed.

There are usually two methods besides trap-nesting whereby breeders "Scientifically" breed poultry. One is the "average" system and the other is known as the "Hogan" system.

When I knew no better I worked on the average system. When I thought I knew all that there was to know I worked on a combination of both systems. I soon found I was working in the dark. Let me tell you with either of these systems or a combination of *both you are working in Utter Blackness.*

SCIENTIFIC SELECTION AND MATING can be done by means of trap-nests. No other way will do. Here are one or two experiences of mine. Two birds between them laid 312 eggs in their first laying season. To get their average I must divide by two and so get 156. But one bird actually laid 227 eggs whereas the other laid 85. This latter went from bad to worse, laying 55 eggs in her second season. (She has made an excellent roast in spite of the fact *that every egg was over 2½ ounces.)* This was by no means an individual case. To work on the average system and have one bad layer in an otherwise excellent breeding pen, is enough to destroy your entire stock in your very next generation, specially if that breeding pen is headed by a cockerel from that parent.

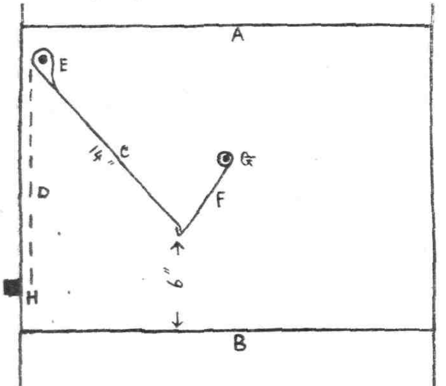


Fig. 2.

SECTIONAL DIAGRAM OF TRAP-NEST.

A. Droppings board of top compartment.

B. Floor of trap-nest.

C. Door, suspended on rod E, bent at end to engage hook F.

D. Position of door when closed.

G. Bolt in partition wall on which hook is suspended.

H. Wooden battern bolted in position against which the door will come to rest.

The "Hogan" system is the "Measurement" system. So many fingers between pelvis bones, and so many fingers between pelvis bones and end of breast bone. Utter Tosh that is all I have to say for the system, my trap nests have proved it so. You may pick out your Derby winner once, but for each time you do so you will have failed ten times. Here again one bird which passes the test in measurements, but proves to be a bad layer, will ruin your entire stock in a very short time. I have more than once had my best "Measurement" bird prove to be my worst layer.

I have heard many fishy stories of fish. Both the above systems are "fishy". Trap-nests will never lie.

I choose my birds for my breeding pens from pullets that commence to lay any time before the end of December, and a bird that does not give me 50 eggs within any 90 consecutive days from November to February inclusive, never goes into my breeding pen. Moreover 95 per cent. of her eggs must be over 2 oz. and no egg of less weight ever finds its way into the incubator.

Do not expect such performances unless the birds have been in their pens, in which they are to be trap-nested, at least a month before you start to record their eggs. Remember also that any sudden change in weather, or thunder and lightening, or the school boy, just back from school, charging through the yard with his favourite hound in pursuit of squirrel, in fact any fright or worry is apt to send what would have been a record score, down to Nil.

The trap-nest fronts fitted to these W. S. houses are the most simple, inexpensive and effetive the writer has seen or used. The door is made of thin galvanised sheeting folded over at one end to form a channel through which the rod (previously described) passes.

A hook made of wire the thickness of an ordinary nail, is suspended from a bolt fixed into the partition wall.

To adjust the trap the door is pushed inwards and held at the bottom by the wire hook. The hen goes into the nest under the door. Her back raises the door still higher thus releasing the hook. The door then slips quietly over her tail and closes behind her. To prevent the hen from pushing the door outwards and thus releasing herself, all that is necessary is to tie on a length of split bamboo or wooden battern at the front bottom of the nest; against which the doors will come to rest.

To release the hen, the door is pushed in and the hen caught in both hands as she emerges.

Fig. 2 will fully explain the working and construction of the trap-nest.

The trap-nests when no longer required are easily converted into ordinary nests by prizing open the channel of the door and sliding it off the rod. The bamboo tied in front is also removed.

Modification No. 1.—A breeder who was struck with the idea of my W. S. houses installed 12 of them on his farm with a little modification of his own.

Instead of galvanised sheeting, for the two floors of the house, he used wood. The houses were constructed in exactly the same manner as previously described, but instead of bolting the two lower rectangular frames on with one of the "wings" of the angle iron facing downwards, they were fixed so as to face upwards. This formed a seat and ledge to receive the wooden floor. Planks from old packing cases were used cut in two feet lengths. These fitted exactly across the floor, without being nailed into position. They were removed every two or three months, dipped in a disinfectant and replaced. Cheaper perhaps at first but not so in the long run. Less liable to extreme of temperature I will admit, but the writer has never found the galvanised sheeting objectional provided the houses are kept in the shade, plenty of grass is placed in position for the nests, and wooden perches provided for the birds to roost on at night.

Modification No. 2.—A villager who had done me a little service at one time, was the recipient of one of my W. S. houses which he preferred to the reward offered. A year later when I visited his village, I was pleased to see he had installed another two W. S. Houses but with modifications of his own. He could not rise to the price of the galvanised sheeting, nor had he any packing-ca e planks at hand. Instead of these he spread a carpet of split bamboos across the width of the floor (2 feet) and laid a thin plaster of clay over the bamboos. He used no perches and was able to accomodate twelve hens in each compartment. The houses, which cost him only Rs. 6 each to build held twenty four birds each. They were large birds, a cross between two heavy breeds, and looked as well as any I had seen on the farms of more experienced breeders. During the day a little straw was placed in the lower compartments for the nest.

The houses were placed under an old disused cow-shed where they were amply protected from sun and rain. The villager assured me that as the bamboos cost him nothing, he removed these floors every six months and replaced them with new ones.

I can see no objection why birds cannot be kept in this manner (without perches) by many who claim to keep poultry. A visit to their yards will sometimes reveal the most revolting conditions under which birds are "imprisoned" with "hard (and filthy) labour."

If you, kind reader, connot afford to pay six rupees to house twenty four birds in a house which will afford a moderate amount of comfort to the birds, it is far better (certainly for the poor birds) that you refrain from trying to keep Poultry.

If you expect eggs from your birds then the very least you can do for them is to afford them a night's comfortable rest, free from blood thirsty suckers, insanitary conditions obnoxious atmosphere and damp floors.

I can honestly affirm, and so have many others, that these W. S. houses are the cheapest and most effective ever introduced to the Poultry Breeder in India.

The roof is a thing apart, may be temporary or permanent as you choose, but the house itself can be put anywhere. A roll of wire netting is all you want to put around it to make a pen while you construct more permanent arrangements to accomodate these houses. There is no need to sell off all you stock and commence a fresh each time you are moved from one station to another.

Ticks.—It has been suggested that these W. S. Houses are little more than tick-proof perches on four legs, so why not have tick proof perches only ? This is partly true, the nests are also tick proof. But they answer yet another essential purpose which the ordinary tick-proof perch does not. Should a bird fall off the perch at night it is still "high and dry" on the droppings board, whereas a bird falling off any other arrangement and alighting on the floor for one night only, is sufficient to cause the infection of the whole flock the next night when she returns to roost on the perch. The tick as you know is a nocturnal animal and will only attack the birds at night. It would be a very rare occurence if a bird were to pick up the pest from the ground during the day.

I have more dread of the **Tick** than all the other ailments put together from which fowls suffer. I have often been asked for my opinion on birds suffering with "such and such" birds "not laying", etc. On examination I spot it at once—**Ticks**—the other troubles are only consequences. I once went to the yard of a keen fancier in company with an eminent poultry expert, to investigate why the birds were "such and such" and "so and so" and "no eggs". While the expert carefully examined the birds, I walked quietly round to see the housing arrangements. Before I got as near as three yards from the houses, I spotted the trouble—**Ticks**—"Nonsense" said the good lady, "my houses are washed down with so and so every morning. I will give you a rupee for every tick you find". I called for a screw-driver and prized up a strip of wood which held down the wire netting. Hundreds did I say ? No there were millions. Alas ! I am not a millionaire today, because I did not have it in writing hence this effort of mine ! You have it here in writing, however, that the W.S. Houses are **Tick-Proof** and vermin-proof and also fool-proof.

You might well ask why all this fuss about ticks. If it was not for my own losses when I firt commenced the art of Poultry culture, if it was not for the depredations of this monster of destruction, if it was not for the want of an effective means to overcome the thousands of rupees of loss caused by this blood-sucker, this work would perhaps never have been written.

You can never have healthy birds if your houses have **Ticks** and vermin. What you can do perhaps is to raise (in course of time) birds immune from **Tick Fever**, but what you will never accomplish is to produce a strain which will lay well during the day time while their life-blood is sucked out ceaselessly every night.

I once had the misfortune to see some beautiful hens, lately imported, brought to the Show Grounds suffering from **TICK FEVER.** The proud owner of these birds was more than an ordinary fancier, he was an expert. He told me the birds were suffering from cold and green diarrhoea—these were only the consequences. I was able later to convince him that it was **Tick Fever** and not until I insisted that the birds be treated for the cause, was there any relief. Had these valuable birds been installed in a W.S. House, the tick would have been vanquished, provided, of course, the birds were not carrying the ticks **Before** they were placed in the house. No house can be tick-proof if birds carrying ticks are placed in them.

And now, dear reader, barely a month later these imported birds were placed in the Breeding Pen and eggs were sold like hot cakes from "Imported Strain". Poor progeny—the mothers barely over tick fever probably not over it, probably they had developed a partial immunity, probably still being sucked dry by this night-mare **The Tick**—every night, and yet "Eggs From Imported Strain". It would probably be a year before these hens would have been in a fit condition to serve the breeding pens, but more probably they would never be fit again. One thing is certain I would never want any stock from them.

(To be continued).

SHOW REPORT OF THE SOUTH INDIAN POULTRY ASSOCIATION.

18th June 1932 was the day of the Poultry show. It was held in combination with the Nilgiri Agri-Horticultural Society's Flower Show under the kind patronage of His Excellency the Governor of Madras. At the premises of the Coonoor Club, two spacious tents were specially pitched, and the show pens were arranged in a rectangular form. The total number of birds exhibited was about 180 and almost all the classes were well represented.

Spotless milky white feathers and the splendid constitution of Wyandottes, though tiny none-the-less beautiful and pleasing Bantams, stately and well bred Game birds, all exhibited by the Yuvarajah and the family of Maharajah of Pithapuram drew the attention of many of the visitors. Minorca and R. I. Reds and Light Sussex and also Leghorn White were also well shown. Excellent specimens of Pigeons were exhibited by some season visitors, and the nice collection of good eggs exhibited by Mrs. Egan of Kotagiri deserve special mention.

The show was opened to the public at 2 P.M. soon after judging was over and visitors began to pour in from 2 P.M. till late in the evening. His Excellency accompanied by His staff visited the show. In the absence of our President, the Maharajah of Pithapuram, Rao Sahib A. Thangavelu Mudalair, the Show Secretary took them round. His Excellency was very much interested to know the full details of the valuable exhibits and complimented the orgahisers for the nice collections received and the adequate and neat arrangements provided for them. At about

LIGHT SUSSEX

Record Laying Stock

Twice Winners of Laying Trials in England.

Sittings per Rs. **15**/- a doz. Reduced from Rs. **20**/- Cockerels from 6 months old from Rs. **10**/-. Pairs, I cock I hen from Rs. **20**/- per pair. Trios from Rs. **30**/- according to quality.

Reductions in prices solely to make room for new importations.

M. WARD.

Red. GABLES,

Shillong,

(Sole importer of pedigree Light Sussex in Assam.)

12

ENGLAND'S

LEADING POULTRY JOURNAL.

THE POULTRY WORLD

is edited by

C. A. HOUSE,

assisted by

WILL HOOLEY, F.Z.S.,

and a brilliant staff of contributors.

FREE ADVICE

on all poultry problems is willingly *given at all times.*

The practical outlook, the wealth of good ideas and profit-making hints will immediately impress you when you see "The Poultry World." Every page is written by experts who know poultry because their whole lives are spent in the fancy; and they give you the full benefit of their experience liberally and *without stint.*

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THE POULTRY WORLD

2D. **WEEKLY** **2D.**

4, CARMELITE ST. LONDON, E4

or

Exc. *Through the* **I. P. GAZETTE.**

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RIENTAL POULTRY FARM.

Sadabad, Dist. Muttra, U. P.

eders of R. I. Reds, Black Minorcas, Sussex, White and Cuckoo Leghorns.

Young stock from the said breeds available at reasonably low rates.

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Leghorn eggs	@ **Rs. 7/-**	per doz.
R. I. Red eggs	@ **Rs. 7/8-**	per doz.
Black Minorcas	@ **Rs. 6/-**	per doz.

R. I. Reds. Australorps

Wh. Leghorns Bl. Minorcas.

Pedigreed Poultry selectively bred m imported strains of prolific layers—ndard type and excellent colour.

Whole-time personal attention—ipuests in use throughout the year.

Cockerels and Pullets (from 6 months l)—Rs. **10**/- each, Trios—Rs. **25**/-,

Crate & Freight extra.

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IMPORTED DECEMBER 1931.

Black Leghorns.—(Tennyson Fawkes)
White Wyandottes ... *(Sperrin)*
R. I. Reds ... (Sperrin)

Black Leghorn and Wyandottes Rs. **18**/- per sitting of 15. R. I. Reds. Rs. **15**/-.

Ex-Ut Wh. Leghorns.—Australorps, Minorcas, Rs **10**/- Basras, Ut R. I. Reds Rs. **7**/-.

Prices reduced to encourage poultry *breeding. 10% reduction to members of* I. P. Club. Young Stock and Chicks for Sale.

My stock won many 1sts, 2nds and 3rds also specials at the 1931 All India, Cups and eight places Allahabad 1932.

Quality Second to None

S. K. SHAMSHADALI.

12 St. Sadulla Khan. **Delhi.**

Quality Gains Confidence.

My numerous wins at this year's

ALL INDIA.

Fresh stock imported this year. Sittings and young stock available and booked in strict rotation.

Breeds :—R. I. Reds, Minorcas, Wh. Leghorns, Wyandottes, L. Sussex and Chittagongs.

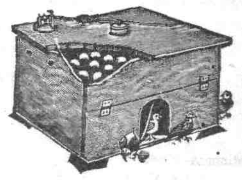
Prices per sitting of 15. N. R.

Chittagongs ...	...	Rs. **12/-**
Other Breeds ...	...	„ **20/-**

Capt. S. R. CARROLL.

Deoli.

12 **RAJPUTANA.**



The Celtic Incubator and rearer, 20 eggs size Rs. 25 30 eggs Rs. 30. 45 eggs Rs 35 Complete with best English Thermometer. Capsule and printed instructions Profitable Poultry Farming in India Booklet Re. 1. "Eggon" one packet makes twelve fowls lay continuously six months Rs 2. "Preserveg" preserves 50 eggs ans. 6. Tick Proof Perch Brackets Rs. 2-8 pair Egg testing lamps Rs. 3. Coloured celluloid rings fowl size ans. 4. Numbered rings ans. 8. Chick rings ans. 4 per dozen. Safety egg boxes ans. 12. Automatic fountains chick Rs. 1-8 Fowl size Rs. 2. Chick troughs Rs. 1-8. Best British made Incubator Capsules Rs. 5. Thermometer Rs. 5. Flint and limestone grit chick size fowl size 7 lbs. Rs. 1-4. Chick rearing meal 5 lbs. Rs. 2. Poultry laying meal 7 lbs. Rs. 2. Poultry Remedies D. R. Cholera and Diarrhoea cure D. R. chicken Pox *cure D. R. Vim Tonic pills. D. R. roup cure* "Ticklo" kills ticks, all Rs. 2 each Full detailed illustrated list free. ROSS I. P. G. Poultry Appliances

IGATPURI G. I. P.

12.

5 P.M. His Excellency was kind enough to give away the trophies such as cups, etc., to the respective winners. Major number of prizes were carried away this year also by the Yuvarajah of Pithapuram and we render our hearty congratulations to him on his success this year also. The very fact that they have sent their exhibits to the show at a time when poultry epidemic is widely prevalent in the hills, clearly indicates their interest in shows of this kind, and we wish that other poultry farmers emulate their example and encourage the Association in its activities. We wish them further luck and hope the interest they have will be a sustained one. Our thanks are also due to the judges who took immense pains on the occasion and through these columns we wish to heartily thank them and all the donors, and others, who by their liberal donations and offer of Special prizes, etc., have greatly helped the Association, and thus contributed to the success of the show. We feel highly flattered when we think of the financial help rendered by the Maharajah of Pithapuram, and effective help given by Mrs. Egan of Kotagiri towards the expenses of the show specially organised at Coonoor this year and we heartily thank them for the kindness. If more men like our Maharaja Sahab were to come forward and evince greater interest, we are sure that poultry breeding in India, as in other foreign countries will certainly make rapid improvement to the delight of all those having an interest in that art.

Finally we regret very much for the absence of our President on the show day owing to some unavoidable circumstances which forced him to go to Madras suddenly.

C. RATNAM,
Hon. Secretary, S. I. P. Assn.
Aruvankadu, Nilgiris.

A list of winners in the show is given below:—

Minorca—Cock or Cockerels—4 entries.
1st Mr. R. A. D. Nathan.
2nd „ T. O'Brien.

Minorca—Hens or Pullets—5 entries.
1st Mr. Arokiasawmy.
2nd „ R. A. D. Nathan.

Excellent collections—winners a good specimens.

Leghorn, white—Cocks or Cockerels—4 entries.
1st Mr. R. A. D. Nathan.
2nd „ H. Wright.

Leghorn, white—Hens or Pullets—7 entries.
1st Mrs. Egan.
2nd Mr. H. Wright.

On the whole the Pullets were in excellent condition than male birds.

Wyandotte—Cocks—5 entries.
1st and 2nd Yuvarajah of Pithapuram.

Wyandotte—Hens and Pullets—14 entries, but on 9 birds staged.
1st, 2nd and 3rd Yuvarajah of Pithapuram.

The bred birds beat outright the *imported ones* all respects. Beautifully prepared for the show.

Orpington, white—Cock and Hens—3 entries.
2nd Mr. Bhagyam.

Only one ward, these were not up to the mark.

R. I. Reds—Cocks—7 entries.
1st Mr. Ponnusawmy Pillay.
2nd Mrs. Egan.

R. I. Reds—Hens—4 entries.
1st Mr. C. H. Reader.
2nd Mrs. Egan.

The winners nice birds—colour, plumage, etc., a in good condition—some of them rather out proportion.

Light Sussex—Cocks—4 entries.
1st Mr. Chockalingam.
2nd „ Christie.

Light Sussex—Hens—7 entries.
1st and 2nd Mr. Chockalingam.
3rd Mr. John.

The placing of the cock class was exceedingly clo between 1st and 2nd, but for the comb (2nd winne which was not in good order, the 2nd bird wou have easily won the 1st prize. The bred hen bir easily won the imported birds.

Indian Game—Cock heavy—5 entries.
1st and 2nd Yuvarajah of Pithapuram.
3rd Mr. S. C. Armour.

IndianG ame—Hen heavy—6 entries.
1st, 2nd and 3rd Yuvarajah of Pithapuram.

All those birds shown well and true type Hyderabad games. Exceellent condition.

Indian Game—Cock and Hens—light—4 entries.
1st and 2nd Raj Kumar of Pithapuram.

Same as above, but very poor entries and competittion.

A. O. V. Light variety—Cock and Hen. **Blac Leghorn**—3 entries.
2nd Mr. Ardhie Ammal.

Very poor condition, hence only one 2nd prize w awarded.

Bantam—Cock—5 entries.

1st and 2nd Sree Rajkumari of Pithapuram.

Bantam—Hens—5 entries.

1st and 2nd Sree Rajkumari of Pithapuram.

Bantam—Hens—5 entries Sree Rajkumari of Pithapuram.

Excellent specimens appreciated much by visitors.

Any variety exhibited by Novice—Cock—15 entries.

1st Mr. Chockalingam.
2nd ,, Arokiasawmy.
3rd ,, Christie.
4th ,, T. O'Brien.

Any variety exhibited by Novice—Hens—18 entries.

1st Mr. Arokiasawmy.
2nd and 3rd Mr. Chockalingam.
4th Arokiasawmy.

Excellent collections and better competition this year.

Trio, Heavy—11 entries.

1st and 2nd Yuvarajah of Pithapuram.
3rd Mr. Chockalingam.

Trio, Light—6 entries.

1st Mr. H. Wright.
2nd and 3rd Mr. R. A. D. Nathan.

Trio, Bantam—3 entries.

Shree Rajkumari of Pithapuram.

Keen *competition—all the birds well penned as* trios.

Pigeons—12 entries.

1st Master Dharmaraju.
2nd Mr. Arokiasawmy.
3rd ,, Asyaia.

Some good type of pigeons were exhibited this year.

Eggs, brown and white—8 entries.

Two firsts and one second Mrs. Egan.

The eggs formed one of the best exhibits in the show. On the whole the *brown eggs were superior* to the whites.

Eggs, duck—2 entries.

1st Mrs. Haggins.

II.—LIMITED.

Any variety exhibited by Indians.

Class 43—Cocks—11 entries.

1st Mr. Chockalingam won with Light Sussex.
2nd ,, Christie ,, ,, ,,
3rd ,, Arokiasawmy ,, White Leghorn.
4th Mrs. Ardhie Ammall ,, Black ,,

Class 44—Hens—17 entries.

1st Mr. Chockalingam won with Light Sussex.
2nd ,, Christie ,, ,, ,,
3rd Mrs. Ardhie Ammall ,, Black Leghorn.
4th Mr. Arokiasawmy ,, White ,,

Excellent birds were shown—keen competition and better advancement this year.

Class 47—Cock and Hen—any variety exhibited by Novice—3 entries.

1st *Pouly Butler, won with Leghorn.*

SPECIAL PRIZES.

1. Silver cup presented by His Excellency the Governor of Madras.
   Best bird in the show.
   Won by—Yuvarajah of Pithapuram.
2. Silver cup presented by His Excellency the Governor of Madras.
   Best bird exhibited by an Indian.
   Won by—Mr. Chockalingam.
3. Silver cup presented by the Maharajah of Pithapuram.
   Best bird in the show—opposite to winner No. 2.
   Won by—Mr. Chockalingam.
4. Silver cup presented by the Maharajah of Pithapuram.
   Best bird **Bred** by an Indian.
   Won by—Mr. Chockalingam.
5. Silver cup presented by the Maharajah of Pithapuram.
   Best Rhode Island in the show.
   Won by—Mr. C. H. Reader.
6. Silver cup presented by the Maharajah of Pithapuram.
   Best Leghorn in the show.
   Won by—Mr. H. Wright.
7. Silver cup presented by the Maharajah of Pithapuram.
   Best Minorca in the show.
   Won by—Mr. L. Arokiasawmi.
8. Silver cup presented by His Highness the Maharajah of Jaipur.
   Best Trio in the show—heavy.
   Won by—Yuvarajah of Pithapuram.
9. Silver cup presented by Rajah Saheb of Bobbili.
   Best Trio in the show—light.
   Won by—Mr. H. Wright.
10. Silver cup presented by the Rajah Saheb of Khallikote.
    Best Wyandotte in the show.
    Won by—Yuvarajah of Pithapuram.

11. Silver cup presented by the Zeminder of Buchambetta.
Best Indian Game in the show.
Won by—Yuvarajah of Pithapuram.

12. Silver cup presented by M. R. Ry. Rao Sahib, A. Thangavelu Mudaliar, Avl.
Best bird in the show—opposite to winner No. 1.
Won by—Yuvarajah of Pithapuram.

13. Silver cup presented by M. R. Ry., Rao Sahib A. Thangavelu Mudaliar Avl.
Best pair in the show—heavy.
Won by—Yuvarajah of Pithapuram.

14. Silver cup presented by Mr. R. Ry. S. V. Ramasawmy Mudaliar Avl.
Best Bantam in the show.
Won by—Sree Rajkumari of Pithapuram.

15. Silver cup presented by Mrs. C. E. Egan, Kotagiri.
Best bird exhibited by a Novice.
Won by—Mr. L. Arokiasawmy.

16. Silver cup presented by Mr. C. H. Reader Ootacamund.
Best Light Sussex in the show.
Won by—Mr. Chockalingam.

17. Silver cup presented by Mr. R. A. D. Nathan, Ootacamund.
Best Orpington in the show.
Won by—J. B. Bhagyam.

18. Silver cup presented by Messrs. Jewellers, Ltd.
Best bird Bred by an exhibitor.
Won by—Yuvarajah of Pithapuram.

19. Silver cup presented by the Indian Poultry Club.
Best bird exhibited by a member of the Indian Poultry Club.
Won by—Yuvarajah of Pithapuram.

20. Silver cup presented by the South Indian Poultry Association.
Best pair in the show—light.
Won by—Mr. H. Wright.

21. Silver cup presented by the South Indian Poultry Association.
Best collection of eggs.
Won by—Mrs. C. E. Egan.

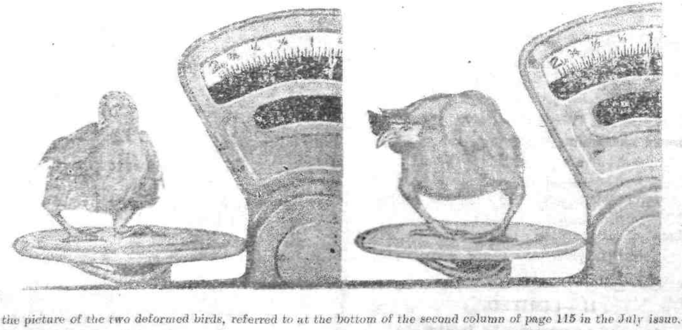
MINERALS—THEIR USE AND ABUSE.—Light on a Knotty Problem.

This proves how carefully breeders should handle minerals in the feeding of their flocks.

Only One Answer.

(Continued from last month.)

The question naturally arises in the feeder's mind—"How can I balance my growing rations ?" My answer is that I know no simple way that lies within the ability or the facilities of the average poultryman to do this. Calcium-phosphorus mineral balance is a basic matter that refers to the balancing of the elemental calcium and phosphorus of the ration. It



Here is the picture of the two deformed birds, referred to at the bottom of the second column of page 115 in the July issue.—Editor.

doesn't refer to calcium carbonate or the phosphates directly, but only with the calcium and phosphorus contents thereof. It deals with these elements as they are present naturally in the complete feed. Limestone (calcium phosphate or carbonate), bone meal and similar substances are simply ingredients used in balancing the mash only after the actual elemental calcium and phosphorus content of the mixture has been determined by quantitative analysis of the laboratory. Ingredients such as the foregoing are but used to produce the balance. Mineral balance having once been determined for a feed, it is apparent that any future change in the mash feed formula will require an entirely new analysis and calculation. That fact alone is a tremendous argument as to why uniformity in a feed formula is important and can only be obtained by constant laboratory control.

Make no mistake, this matter of calcium-phosphorus mineral balance is important. It is tremendously important, and, in addition, it is very complicated indeed. I have seen a group of our own

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Pure White Leghorn, Rs. **12/-** per doz. Cross-bred Black Orpington, Rs. **6/-** per doz. Sikim and Hill Fowl Eggs, Fowls of all sizes, ducks, geese and turkeys are always supplied at moderate rates by—

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I. P. GAZETTE,

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SOUTH INDIAN
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Nos. 1 and 2.

No. 1 Cures Cholera and green Diarrhoea.

No. 2 Cures Tick Fever and contains *directions how to get rid of* ticks.

Full instructions with each box. 48 Pills in a box. Re. 1. When ordering write name and address distinctly.

Pills for Turkey chicks during *their infancy to pull them through* their infant ailments.

Apply A. G. Roberts,

3-B, Museum Road, Bangalore.

2.

graduate chemists, biologists, and nutritionists sit down with a bunch of figures and analyse and work for over two hours trying to effect mineral balance in a single formula, and yet at no time during the whole discussion did the actual portion of the formula that they were trying to adjust comprise more than ⅜ of 1 per cent. of the mash. In other words, they were bringing all the powers of their training and of modern science to bear in an attempt to make right just twelve ounces of feed in every one hundred pounds.

A Question of Ounces.

We are very rapidly approaching the day when good feeds are going to vary from poor feeds primarily by the ounces or fraction of ounces of this or that important element that is contained in one and absent in the other. You may get a satisfactory mineral balance in your home-mixed or locally mixed feed, but I feel safe in saying that if you do you can regard it as purely a lucky accident and not purposeful. Such feeds, as a rule, do not and cannot have behind them the scientific knowledge, manufacturing accuracy, and the laboratory control that mineral balance involves.

At about this point someone is probably going to rise and loudly shout: "Bunk! I've never had this trouble in my flock. I think the feed manufacturers and scientists are in a conspiracy to scare us poultrymen into buying their commercial feeds." I honestly wish it were "bunk".

No, my friend, you probably didn't have a big bunch of weak-legged, deformed runts before you ever heard of "vitamins, mineral balance, and those other new-fangled discoveries." But—neither did you hatch your chicks in late autumn and early winter, raise them indoors or in batteries and have them weighing better than two pounds at eight weeks of age and developed and laying at a profitable rate at somewhere around five months of age. Modern methods of poultry keeping are responsible for making necessary modern feeds. Let a hen steal her nest in spring and raise her own brood, and, of course, she will do a fairly good job. You won't have to worry about sunshine or vitamin D, and as the chicks pick around over the fields instinct and Nature will afford them mineral balance. But who can run a successful poultry flock on such a basis to-day?

This subject requires a careful study which will do immense good.—*Editor.*

LETTERS TO THE EDITOR.

DEAR SIR,

I read with the greatest interest each month the newly arrived Indian Poultry Gazette, but I cannot recall a single instance of one of the brothers of the fancy telling us how he has bred and raised a flock of poultry and ducks and made a profit out of the sale of eggs and roasters and boilers. This undoubtedly is being done in every other country in the world, is it impossible in India?

When I demobbed I came back to the estate in a very jungly place seven miles from the Nepaul border and started to build a house and establish a farm. This was more or less a necessity as this place is so jungly that you cannot even buy decent dal in the bazar and the mutton and goat is so poor that it is not worth-chewing. Consequently I had to start a farm and keep my own cows, sheep, swine, and poultry. Desi-poultry being such wasters and so riddled with disease and vermin that I started getting eggs from Mrs. Fawkes when the United Provinces Poultry Association was in the Sikenderbagh Gardens. I have never liked the light breeds and so from the start only used to get R.I., A.O., L.S., and W. W. a bunch of 60 at a time and put them in a Hearson No. 9. which I brought out with me. Those eggs used to cost a rupee each and the man's expenses to Lucknow and back. When the chicks hatched they were put in a home made brooder, *i.e.*, large packing case made from the boxes and crates and the tractor and thrasher, etc., with a Dietz lantern in the corner and a bath thermometer to check the temperature. Day times in a run of ½" wire about 10 ft. by 6 ft. and 1½ ft. high on the lawn in front of the veranda after three weeks they went into chapper houses in the compound under the trees carefully shut in with ½ inch jali burried in the ground going 6 ft. high and covered over with 1 inch jali to keep out crows, hawks, mynahs, and sparrows. When old enough they roamed around the grass compound 4 acres and were shut up at sunset and let out at dawn. The first three weeks the chicks were fed hard eggs and shells, stale bread and skimmilk, mashed bones and meat scraps, and later pinhead wheat and dry mash, each day chopped onion and garlic was given. Dry mash consisted of one maund each of wheat, barley, chana, maize and saghum, which were ground nearly to ata by an International Feed Grinder Model Bor Cand a ½ Petter Handyman engine—they are still going strong and not broken down or worn out. Women grinding in chakkies was soon discarded as they stole half and turned out so little in a day. Dry mash was fed in hoppers made from Snowflake boxes and wet mash was made by soaking over night, boiling in morning and mixing with house scraps, chopped vegetables, and skim milk, also Tonic Powder, Gentian, Ginger, Liquorice, and Nux Vomica, Mag: Sulph., Soda Sulph., Ferri. Sulph., Pot. Nit., and Pot. Iodide.—out all day grazing insect and grass from dawn to sunset.

Jackals carried off some and so gradually the 5 strand cow wire was lined with 1" by 3' jali and the jackal and kite losses not noticeable, the jackals used to panick the ducks by racing round their chappar at night. I've shot them from the window in moon-light nights. Then corrugated galvanised sheets were stood around the duck house and tacked to the post making a wall 2½ ft. high and a lantern was left all night. Hen perches 6 ft. by 10 ft., frame slung from wires from the rafters.

Poultry houses consist of brick pillar middle 15 ft. side 10 ft. set 10 ft. apart giving floor space 20 ft. by 20 ft. per compartment the roof is properly carpentered and of tarred ballies and battens with proper teli thatched tied on with wire and not ban. Inside earth floor and 3 in. sand, round the walls are stood kerosene boxes and grocery boxes all about 18 in. high containing a layer of moss, sawdust, and sand sifted

MPORTED LIGHT SUSSEX.

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Sittings Rs. **20/-** per dozen.
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White Leghorns—(Record Layers).

Sittings can be booked (from Nov. 1st onwards) when New Importations are expected to arrive.

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"Imported Utility White Leghorns."

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2nd Pen ... ,, **6/-** ,, ,,
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Eggs for Hatching ... " **4/-** " Stg. of 15 No replacements.

Freight to nearest Rly. Station extra.

Read what the HON. SECRETARY of the I. P. CLUB says of our stock.

"Many thanks for the trio of Guinea Fowl which arrived safely and are good value for money."

Mrs. L. L. HARMAN,
Ramgarhwa, B. & N. W. Rly.

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POULTRY CUREALL PILLS.

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Price Rs. **2/-** per packet of 100.

The roughly reliable Asils and eggs available.

Price Rs. **55/-** per pair and eggs **15/-** per doz.

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P. O. CHHUCHAKWAS,
Dist. ROHTAK.

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KATPADI, S. INDIA,

Largest Poultry Farm in S. India. Yearly importers and breeders of W. Leghorns, R. I. Reds, Black Minorcas, Barred Plymouth Rocks and Light Sussex.

Eggs, day old chicks, and breeding stock for sale at reasonable prices.

Cata'og on request.

Several used incubators for sale.

J. J. De VALOIS,
Manager.

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POULTRY FARM.

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WHITE LEGHORNS

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February onward young stock will be available and booked in strict rotation.

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2

UNIQUE EXPORT GUARANTEE.

As your late Secretary and Editor and exporter since leaving India our reputation for square dealing is well known. But in future will export utility poultry on approval i e., if not approved on arrival, send to Calcutta, Rangoon or all India Show for auction and if purchase price not realised we will refund difference. George Howard.

2

A £ 5 PRIZE.

Maintain the Stamina and quality of "Sperrin" strains by keeping them pure. We offer each year a cockeral value £ 5 as special for best bird at All India show bred in India from our strains, with no outcrossing. If you cannot import, then enquire conditions and purchase eggs from those who have our imported stock. Geo. Howard.

2

daily with wood ash. There are no vermin because no desi fowl enters the boundary fences of the farm. On one side is a fattening pen $1\frac{1}{2}$ in. battens and $\frac{1}{2}$ in. jali fixed into compartments about 18 in. square and high and lift up lids for two at a time. Galvanized feed troughs in front of Slats and handies tied for drinking water. Cockerels when they start to crow and chase the hens go into the coop for 15 days and are fed all they will eat of wet mash, and skim milk, porridge, and melted mutton fat from the butcher. The R.I.—A.O. cockerel at 7 months weighs about 4 to 5 lbs. and deducting 1 lb. for feathers and guts that give you roasters from 3 to 4 lbs. each. Drakes likewise stripped and gutted about 3 to $3\frac{1}{2}$ lbs. each.

Eggs only go into the incubator if they are tinted, a dark shade, and over 2 oz. so as to have a standard type and grade.

Now we came down to business. I have at present about 200 chickens crossed *R.I.—A.O.* with some of the old Palia strain of L. S. W. W., and Buff Rock still showing, also about 150 Ducks Runner, Desi, Aylesbury that I got from the United Provinces Poultry Association in 1923 or 24.

I have shut down the business of tractor ploughing and growing of cereals Pusa 12. Suttons imported Captain Oats and Suttons imported Barley, and *chana, Kabuli mutter, maize, and sorghum and bajra*, on my 150 acre home farm because formerly 200 spent in growing a crop brought in Rs. 400 when it was in bags, whereas now with wheat at Rs. 2 and barley at Re. 1. *You cannot get a penny more than your costs.* This starvation country knows of no such thing as bonus for quality or breed.

After spending thousands in machineries, plant, and equipment and fuel and spending hours ploughing in the sun at 115°F who is going to rest content with no more than he has spent and all sweat, labour worry, and expense for no profit.

In more enlightened countries when the price of foodstuffs is too low to permit of profit in growing—the rule and custom is to feed them from the field to animals whose meat has not deteriorated in price and hence cheap feed should mean more profit for stock raising and fattening.

Therefore it seems logical to grow and buy foodstuffs and turn the seed farm into a stock farm and secure a profit from the sale of butcher's and poulterer's meat.

Next July and August I shall have about 100 pullets and 75 ducks start laying and hope to get back at least cost and kerosene for incubators and feed grain and attendants at Rs. 6 per month, and something towards cost of wire netting, etc.

I have written to every Club and Hotel and Boarding House in Nani Tal to offer eggs and chickens delivered free daily in Nani Tal at current market rates. The replies are in two classes. *(a)* Clubs, Hotels and some private places say that they have contracts or cannot interfere with their khansamas. *(b)* The other say yes, they are willing to buy English eggs and English roasters at the current market price for desi eggs 1 oz. and desi roasters 1 lb. I have made careful enquiries in Nani Tal Poultry Market. The current prices are English eggs not available, if especially ordered 1/8/- per doz. Desi eggs fresh -/12/- and stale -/9/- and ducks eggs fresh -/10/-. Roaster chicken 1/- and Roaster ducks 1/8/-. So at last you come down to this. Is there a demand for English eggs, English fowls and ducks? The answer apparently is No, because the consumers are willing and content to buy and eat desi eggs and birds at half price. The reflection arises that if desi 1 oz. eggs sell for 12 annas then surely English 2 oz. eggs graded tinted and dated are worth the same price per pound weight *i.e.*, if six English eggs turn the scale against 12 desi eggs then surely they are worth 12 annas or 1/8/- per doz. Likewise if a desi fowl weighs one pound and costs 1/- then surely an English fowl stuffed with the best food from the day it hatched, a big frame covered with thick tender meat weighing 3 lbs. is worth Rs. 3. But No, apparently there is no demand for a luxury animal from the Governor's table down to that of the enlightened Babu.

In other words careful modern scientific poultry farming in India, cannot compete with the Khateek and the higgler and contractor. The only profitable fowl is the scraggy desi murgi raised on the dung heap which is bred by the khateek for no expense at all and sold to the Higgler for say six annas, taken in baskets on foot to Nani, and sold to the cotractor for -/12/- and sold by him on his contract at Re. 1.

I am told that Doon Poultries has shut up shop. I don't know of any Mission Farm, Agricultural College or Training School, that grows eggs and birds for eating and shows a profit on it.

In the Country of the Blind,

The One Eyed Man is King.

BUFF ORPINGTON.

THE INFLUENCE OF DIET UPON THE COURSE OF COCCIDIOSIS INFECTION IN CHICKENS.

[Observations made at the Southern Table Poultry Experimental Station at Wye College, which tend to show that in Coccidiosis in Chickens the diet of birds exerts a material influence upon the ailment. This is perhaps the first experiment which so "strongly indicates that the nature of the ration plays a vital part in determining whether chickens are going to withstand or succumb to Coccidiosis infection, an infection which the great majority of chickens are exposed to"]

* * * * *

When a diet definitely deficient in certain essentials is fed to animals, clearly defined symptoms of disease and pathological changes occur. Where disease is caused by living organism which are parasitic upon the animal body it is probable that the nature of the diet may play contributory part in lessening or aggravating the condition, but the function of diet in this respect is as yet not clearly defined. Should the course of disease be influenced by diets which are not in the strict sense deficient but considered as coming within the sphere of normal, the question becomes one of practical moment.

These notes are concerned with observations made at the Southern Table Poultry Experimental Station, Wye, which tend to show that in Coccidiosis of chickens the diet of the birds exerts a material influence upon the disease.

The contributory cause of outbreaks of Coccidiosis is often obscure though a variety of plausible explanations may be advanced to account for outbreaks of the disease, the soundness of these explanations is generally doubtful, and it has to be remembered that with this disease care must be exercised to avoid placing importance upon a factor which may be purely coincidental.

Every year Coccidiosis causes a heavy mortality among fowls, but despite this and the scientific interest of the problem comparatively few investigations of a fundamental nature have been made upon the disease, and authoritative knowledge is scanty regarding such aspects of the question as the plurality of species of coccidia, the pathogenicity of possible different species, the lesions these produce in the host bird, the resistance of the host to the invasive and destructive action of the parasites under different environmental condition, and the question of acquired resistance or immunity on the part of the host.

However, it may be accepted that more than one species of coccidium exist and that these probably vary in their pathogenicity; further, there are indications that birds are capable of building up a resistance to infection as the result of a previous attack of the disease, and that as far as is known there is no definite increase in resistance due to age alone.

Again it is known that if reinfection of the bird is prevented the disease runs a remarkably rapid course, and that from the time of the birds ingesting the sporulating oocyst to the disappearance of the infection is a matter of not more than 10 to 14 days.

The longevity and great viability of the sporulated oocyst, the infective stage of the parasite, is well known, and practical measures for the prevention of the disease have been formulated with a view to keeping young chicks off ground or pasture upon which poultry have been running and which probably contaminated, and chicks are confined to the narrow limits of the brooder house and possibly a sun porch. But unless the chicks are kept on wire floors it is very questionable whether the exposure to infection in the brooder house is not as great as or sometimes even greater than, would be the exposure were the chicks allowed to range over an area of grass. This is because, if infection of the ground outside th brooder house or on the farm exists, it is virtually impossible, under farming conditions to prevent the infection reaching the chicks in the brooder, and once infection is acquired by the chicks, the small area in the brooder will rapidly become heavily contaminated.

Nevertheless, apparently good results have followed the adaptation of the more confined system of rearing and the losses attributed to coccidiosis have in many instances diminished. Is this improvement due to the adoption of the enclosed system or is it merely coincidental and is it possible that any change in the treatment of the chicks was made about the same time, that might have a bearing upon the course of the disease, *e.g.*, a change of the feeding, say, from a wet to a dry mash, etc.? These questions are worthy of consideration.

The suspicion that diet might have some bearing upon coccidiosis infection arose from the experience of this year's chicken rearing at the Southern Table Poultry Experimental Station, Wye. For the past three years the brooder house and sunporch system has been used for rearing chicks in their first eight weeks of life, and there has been no suspicion that during this period the chickens had been infected with coccidiosis. A number of deaths certainly occured but these were not considered in excess of the usual wastage caused by unknown and unspecified causes and they excited no alarm.

Previous to the introduction of the confined brooder-house there had been definite loss from coccidiosis among the young chicks in the late summar and autumn hatchings.

In 1931 a change was made in the feeding of certain of the chicks. These were given a ration which was given to supply growth and maintenance requirements but not fat, in other words a store ration. This was fed for the first time to a batch of 100 chicks. These chicks commenced to die at the end of third week and by the end of the sixth week the majority were dead and the survivors were unthrifty and worthless. One or two of the dead chicks were sent to the Ministry's laboratory at Waybridge and a diagnosis of coccidiosis was returned. Meantime other chicks kept under comparable conditions but receiving the customary ration fed at the Institute continued to behave apparently normally, and though a number of these animals died, they were too few to excite suspicion, and the cause of these deaths was not ascertained. At first it was thought that the chicks fed upon the store ration and which died from coccidiosis must have been accidentally exposed to a heavy infection, and fresh houses were selected which had been free from all poultry for a period of twelve, months, and into these houses batches of newly—hatched chickens were placed. These were again fed the two rations in order to test their relative merits as regards growth in the chicks, etc., but again the experiment was upset in as dramatic a manner as on the former occassion, chicks fed on the store ration rapidly dying while the other survived.

The results of feeding this store ration were so striking, though along an entirely different line from that intended at the commencement of the experiment, that it was considered of sufficient interest to follow the course indicated and ascertain as far as possible if the ration alone did play such a vital part in the incidence of the disease.

(*To be continued.*)

JOHN H. DOWDEN & SON.

Take the greatest pride in exporting the very best pedigree utility poultry.

WHITE LEGHORNS - WHITE WYANDOTTES
LIGHT SUSSEX - RHODE ISLAND REDS

Clients through the world testify to the high quality of our stock, and the uniformly excellent results obtained under widely varying conditions.

THE "HEYDOWN" STRAINS

have been evolved after 20 years of meticulous selection and pedigree breeding, *and our stock is reared under conditions which ensure the highest possible* degree of stamina.

We shall be pleased to quote inclusive prices for breeding stock, delivered to you nearest port.

Write for our illustrated catalogue, describing our 100 acre farm.

JOHN H. DOWDEN & SON.

"HEYDOWN", Heathfield, Sussex, England.

DOINGS OF THE POULTRY INDUSTRY ABROAD.

In Holland, adequate training of the rural population is one of the most important means to make poultry farming pay. It is recognised that technical training should keep pace with the extension of poultry farming which has taken place during the last few years; and that the greatest possible attention is paid to instruction of the rural population, especially farmers' views and daughters.

Is this not a good idea?

Poultry extension work in the United States is carried on in all of the 48 states. The 3,682 country extension agents spent 8·1 per cent of their time on this subject, 73 State poultry specialists spent their entire time on poultry and thousands of volunteer workers assisted in the project. The extension worker is considered as a member of the agricultural faculty even thought he lives and teaches away from the College,

MOORLA UTILITY POULTRIES.

GUINEA FOWLS EGGS

For hatching Rs. **4/-** per setting of 15 eggs, post or rail free. No replacements.

Mrs. L. L. HARMAN,
Ramgarhwa, B. & N. W. Rly.
Dist. Champaran.

AN OPPORTUNITY FOR POULTRY OWNERS

THAT MAY NEVER COME AGAIN.

DON'T LOSE IT.

PRODUCING AND HANDLING QUALITY EGGS.

From Bulletin 156—University of Maine.

This bulletin is prepared as a guide to the production of the highest quality eggs of commercial size with suggestions for handling these eggs to prevent deterioration and breakage before they reach the market.

Egg Grades.

Size and *quality* of eggs are the principal factors in establishing grades and in determining the price per dozen between grades. In spite of the fact that in the past eggs have been sold case count, the largest and best quality eggs have brought the highest price. Egg size is determined by the weight per dozen. Egg quality is determined by the appearance of the interior condition of the egg as it is held before a light or egg candle. The practice of selling eggs on grade is now rapidly growing and it is unquestionably the fairest basis upon which eggs should be bought and sold.

The U. S. Department of Agriculture has proposed a system of grading eggs that will aid producers, commission men and buyers to reach a common understanding and interpretation of the same. The statement of grades as proposed can be obtained from the U. S. Department of Agriculture, Bureau of Markets, Washington, D. C.

Egg Size.

The size and other characteristics such as colour and shape of eggs from a flock of hens evidently are not predetermined entirely by heredity but are determined by the combined result of hereditary and environmental factors. Both the male and the female have a distinct and approximately equal effect upon the type of egg produced by the progeny and is directly inherited by the progeny.

The fact that large varieties of hens lay larger eggs than bantams indicates that within broad limits the size of the egg is related to body size. This fact has also been substantiated by data collected at egg laying contests which show that the larger birds in a variety lay the larger eggs. Throughout the official egg laying contests and over a five-year period, the Rhode Island Reds have been characterized by laying an exceedingly heavy egg. The Plymouth Rocks and Leghorns coming next with eggs nearly as large, while the Wyandottes continue to lay eggs smaller in size.

No difference has been found in the size of the eggs laid by pullets whether the pullets were hatched from pullet eggs or old hen eggs, even when the practice was continued over a period of years.

Pullets which are forced to maturity and begin laying at a young age when small in body size, begin laying small eggs and tend to lay small eggs for a longer period than pullets which have attained normal body development before starting to lay.

During the pullet year, the size of the egg produced increases rapidly and the size increases slightly during the second year. That is the weight of the egg increases with the weight of the bird.

All of the eggs produced by any hen tend to be of a similar size, shape and colour.

There is a seasonal fluctuation in the weight of eggs and the size of the egg varies according to its position in the clutch or litter.

Disease conditions may cause decrease in the size of the eggs laid.

The feeding of a balanced ration and especially the feeding of green feed and milk tends to increase the size of the eggs.

In general the conditions which favour the production of a large number of eggs also favour the production of large eggs.

The weight of any individual hen's eggs depends upon :

1. Heredity as applied to egg size.
2. Her physical constitution or state of health.
3. Her body size or stage of development.
4. The season of the year.
5. The position of the egg in the clutch or litter.

Egg Quality.

Egg quality is determined by the condition of the interior contents of the egg. The quality may be affected before the egg is laid and since eggs are extremely perishable they deteriorate rapidly after they are laid unless proper precautions are taken.

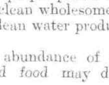
Hens fed on clean wholesome food and provided an abundance of clean water produce the best quality eggs.

Hens fed an abundance of garbage or a large amount of spoiled food may develop undesirable flavors in the eggs.

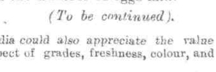
Sudden changes in the feed may affect both the quality and the number of eggs laid.

(To be continued).

I wish India could also appreciate the value of quality in eggs in respect of grades, freshness, colour, and interior conditions etc. *Editor.*



The "SILVER STEEL" Chicken Toe Punch.



Price Re. 1/- postage As. -/2/- only.

The Indian Poultry Gazette,

LUCKNOW.

? ? ?

Questions under this heading are answered free of charge on this page.
Letters should be addressed—*BUFF ROCK*,
C/o. The Hon. Editor, I. P. GAZETTE and marked "Query".
Where readers desire an individual reply they should enclose a stamped addressed envelope and a fee of As. -/8/- is charged.

Miss E. M. from Mussoorie asks :—Can you tell me why the Sex-linked pullet is never seen or heard of in India ?

A.—I think the reason is that Poultry Breeding on Scientific lines in India is yet in its infancy and these are, therefore, very few people who realise the economic importance and understand the laws of Scientific breeding.

"Novice" from Calcutta asks:—(1) What is the normal temperature of poultry ? (2) What are the exhibition points of R. I. R's ?

A.—The normal temperature is 107°F.

The exhibition points of Rhode Island Reds are as follows :—

Cock.

Head—SKULL strong but not thick. BEAK curved, moderately long. EYES large and bright. COMB (*a*) Single or (*b*) rose. (*a*) Medium size, upright, straight and firmly set, with five even serrations; (*b*) low and firm, oval top covered with small points and terminating in a small spike, following the curve of the head. FACE smooth. EARLOBES fine texture, well developed and pendent. WATTLES of medium size and moderately rounded.

Neck of medium length and profusely covered with feathers flowing over the shoulders, but not too loosely carried.

Body—fairly deep, broad and long, but a distinct oblong rather than square ; broad and full breast ; long back horizontal except where the neck-hackle flows over the shoulders and the saddle gently rises ; large wings well folded and the flights horizontal ; fairly small tail, sickles passing a little beyond the main feathers, well spread, and carried somewhat low (but by no means drooping) to increase the apparent length of the bird.

Legs of medium length ; large thighs ; well rounded shanks free of feathers. Toes (four) straight, strong, and well spread. Carriage upright and graceful. Weight 8 lb.

Hen.

The characteristics are the same as those of the cock allowing of course, for the natural sexual differences. Weight 6 lb.

Colour.

BEAK red-horn or yellow. EYES red. COMB, FACE, EARLOBES, AND WATTLES brilliant red. LEGS AND FEET—Yellow or red-horn. A line of red pigment down the sides of the shanks is desirable.

Plumage of the Cock.—HACKLE red, harmonising with back and breast. WING: primaries, lower web black, upper red ; secondaries, lower web red, upper black ; flight coverts black ; bows and coverts red. TAIL (including sickles) black or green-black ; coverts mainly black, but may be russet or red as they approach the saddle. REMAINDER, general surface rich brilliant red, except where black is specified, free from shafting, mealy appearance, or brassy effect ; depth of colour red is slightly accentuated on wing bows and back, but the least contrast between these parts and the hackle or breast the better, a harmonious blending desirable. The bird should be of so brilliant a lustre as to have a glossed appearance. The under colour and quills of the feathers should be red or salmon. With the saddle parted showing the under colour at the base of the tail, the appearance should be red or salmon, not white or smoke. Black or white in the under colour of any section is undesirable. Other things being equal, the specimen having the richest under colour shall receive the award.

Plumage of the Hen.—HACKLE red, the tips of the lower feathers having a black ticking but not a heavy lacing. TAIL black or green-black. WINGS as in the cock. REMAINDER, general surface lighter and more even than in the male, free from shafting or mealy appearance, and except where black is specified a rich even shade of bright red, not as brilliant a lustre as the male. The under colour and quills of the feathers should be red or salmon. Black or white in the under colour of any section is undesirable. Other things being equal, the specimen having the richest under colour shall receive the award.

Individual replies have been sent to Messrs. Norris, New Amherst Rubber Estate. Kyonkdat, Burma and Mr. Bartley of Bina, C. P.

Mr. I. W. Mussoorie :—My Leghorns are from a stock which I lost last year owing to diseases. About the Rhode Island Reds, I took some eggs last year from a lady here. They were hatched in the end of October, '31. Then I took them to the plains, where only two Survived, of which one was a Cockerel. The pullet began to lay infertile eggs in the end of April but the weight is only 4 lbs. up to now and it is undersized too.

The Cockerel is a strange one it does not crow up to now and is undersized and weight being only 3½ lb. Some have advised one to cull it for the table. What would you advise.

(To be continued).

SMALL CLASSIFIED ADVERTISEMENTS.

Advertisements are accepted under these columns at annas four per line, minimum charge Re. 1, for each additional line annas four extra. No additional charge is made for a box number.

Sale.

FOR SALE. Eggs from pure Game birds (Asil) Rs. 12/- per doz. Orders in rotation.
2

Poultry Pills. The only remedy for Cholera, Roup, etc. Rs. 3/- per hundred. S. Armour, Lovedale, Nilgiris, 6.
2

FOR SALE. "A firm in Holland dealing in poultry food and seeds solicits enquiries for ant's eggs from new crop. Large stock at moderate prices C.I.F. Calcutta. Enquiries may be sent to Messrs. Corn van Beusekom, Arnhem. Holland.
1

"FOR SALE. Tamlin 40 egg incumbator in excellent condition. Rs. 100/- F. Simmons, Kulladakurichi, P. O. Tinnevelly District."
2

FOR SALE. Surplus Wh. Leghorn Cockerels. 8 months old. Direct from Dewar's strain. Price including freight and crate Rs. **18**/- each. Corbet, Landale Clarks Charmugria. Dist. Madaripur, Bengal.
3

Exchange.

TO EXCHANGE. One pair surplus superfine Asils for a really good pair of Partridge Wyandotte, Buff Rock, or Jersey Black Giants. Also one equally good pair Asils for a Bull Mastiff or Bull terrier dog. Reply Box No. 43 Indian Poultry Gazette Office, 11, Havelock Road, Lucknow.
2

Wanted.

Situations Vacant.

Holiday Resorts.

Advertiser is willing to take paying guests on her Poultry Farm near a popular hill-station in the Punjab. Quiet open air life.

Particulars from Box No. 45, I. P. G.